

5           HIGH THROUGHPUT PROPERTY TESTING OF MATERIALS  
LIBRARIES USING RHEOLOGICAL DETERMINATIONS

ABSTRACT OF THE INVENTION

10           A high throughput method to determine an amount of a comonomer  
in a copolymer sample of a copolymer system comprises the steps of  
providing a plurality of copolymer samples; creating an array of the  
copolymer samples; measuring a sample complex modulus of each of the  
copolymer samples at a comparison phase angle; and determining the  
amount of a comonomer in the copolymer sample by comparing the  
15           sample complex modulus to a calibration curve, wherein the calibration  
curve relates a concentration of the comonomer in the copolymer sample  
to a complex moduli of the copolymer sample determined at the  
comparison phase angle. A method of determining the amount of a  
comonomer in both a single copolymer sample, and in a high throughput  
20           scheme using the crossover modulus is also disclosed.